

Context Free Grammar for Regular Expression Language

```

<program>      :=      <regex> $$ | '^'<regex> $$ | <regex>'$' $$ | '^'<regex>'$' $$
<regex>        :=      <term><term_tail> | ε
<term_tail>    :=      '|'<regex> | ε
<term>         :=      <factor><factor_tail>
<factor_tail>  :=      <factor><factor_tail> | ε
<factor>       :=      <base><base_tail>
<base_tail>    :=      <rep_op><base_tail> | ε
<base>         :=      <character> | <charset> | '('<regex>')'
<character>    :=      <ordchar> | <escchar> | '.'
<charset>      :=      '['<text><text_tail>']' | '[''^'<text><text_tail>']'
<text_tail>    :=      <text><text_tail> | ε
<text>         :=      <character> | <charset>
<rep_op>       :=      * | + | ?

```

LL(1) Parse Table

	ORDCHAR(1)	ESCCHAR(2)	.(3)	^(4)	\$(5)	[(6)](7)	((8))(9)	(10)	*(11)	+(12)	?(13)	\$(14)
PROGRAM	✓	✓	✓	✓	✓	✓		✓						✓
REGEX	✓	✓	✓		✓	✓		✓						✓
TERM_TAIL					✓				✓	✓				✓
TERM	✓	✓	✓			✓		✓						
FACTOR_TAIL	✓	✓	✓		✓	✓		✓	✓	✓				✓
FACTOR	✓	✓	✓			✓		✓						
BASE_TAIL	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓
BASE	✓	✓	✓			✓		✓						
CHARACTER	✓	✓	✓											
CHARSET						✓								
TEXT_TAIL	✓	✓	✓			✓	✓							
TEXT	✓	✓	✓			✓								
REP_OP											✓	✓	✓	